2005 Edition - U.S. Fish and Wildlife Service (Alaska Region)

Alaska Digital Wildlife Photography Handbook

Bishop's Beach in Homer near the Alaska Maritime National Wildlife Refuge's Islands and Oceans Visitor's Center

Get started with digital photography!

Use the right digital camera for you. Learn how to use your camera and transfer photos into a computer. Practice, practice, practice taking photos. Play with and manage your photos. Print, e-mail, or post your photos on the web.

Have FUN!

Photography Notes

Homer Shorebird Festival birdwatchers- USFWS Photo

Photographers work with line, shape, texture, color and pattern.

Cameras don't capture objects. They capture light. In nature, light is always different. Winter light is different from summer light. Morning and evening light is the best. It's far better than bright noon sun or dark night.

NO PICTURE is worth HURTING or sacrificing fish and wildlife or their homes/ habitats.

Whiskered auklets - USFWS Photo

If you think about an animal's character in the same way you do when you take pictures of people, you'll be on the right track. Make sure you know what you want your images to say about the animal before you begin.

Many photographers start wildlife photography by reading BOOKS and all they can find about the wildlife they want to photograph.

Tell a story. Composition, color and the story are more important than detail and sharpness. Your best plan is to follow the actions of the animal. If you stick it out you get a great shot of them behaving naturally, which can produce some amazing results.

Usually the strongest photos are simple, clear, and uncluttered.

Use natural light and a tripod so your pictures are not blurry. Using a flash makes sharper pictures, but often scares your wildlife. Tripods help you take great pictures with less or natural light.

Your goal as a photographer is to grab the viewer's attention, and communicate an idea, or share an experience, What photos do this best?

Before You Go - Pack your camera bag			
✔	**Extra Batteries** and Power Source	✔	**Small notepad** and pen to make any notes about your pictures
✔	**Extra media** (compact flash card, smartmedia, SD card, xD, cd's, or whatever your camera uses)	✔	**Binoculars** (not required, but nice to have)
✔	**Neckstrap**. Try to get a neckstrap for your camera instead of only a wrist strap.	✔	**Zip lock Plastic Bag** (fits your camera while around water, rain, melting snow, etc.)
✔	**Lens Cleaner -** Always use only photo lens cleaners, never ammonia or clothing or paper towels.	✔	**Camera instruction manual,** tide books, animal guides
✔	**Filters or lenses** (if your camera has these, be sure they're clean).	✔	**USB cord** to download your pictures onto a computer
✔	**Identification** if you lose your bag - include phone, e-mail, contact information.		

Pack your tripod or monopod.

Getting Ready

Gobbledygook or WHAT IS A MEGAPIXEL?

A megapixel is a million pixels. The word "*pixel*" originated from "picture element" (say it fast and abbreviate it and that's how they came up with "pixel").

The more megapixels in a camera, the better the picture quality (resolution) will be when you print the picture. Large pictures need more megapixels for picture quality.

A digital camera with 1.3 megapixels will print a good quality 4 x 3 inch print. A printer that can print 300 dots per inch (dpi) can make good quality pictures. If you need a larger-sized picture than on the chart below, then you will need a camera with more megapixels.

Largest Print Size	Megapixels	Resolution/ Picture Quality
Wallet Size	Less than 1 megapixel	Very low, okay to e-mail or web
4" x 6"	1 megapixel	800x600 low
5" x 7"	2 megapixels	1024-768 okay
8" x 10"	3 megapixels	1600x1200 average
11" x 14"	4-5 megapixels	2272 x 1704 high
13" x 19" and above	6+ megapixels	Very high

Bald Eagle. USFWS Photo

CAMERA	CARD SIZE* 128 MB	256 MB	512 MB	1 GB
6 Megapixels	40	80	160	320
5 Megapixels	51	102	204	409
4 Megapixels	64	128	256	512
3 Megapixels	106	213	426	853

*Approximate shots per card using high resolution setting

The more you know about fish and wildlife the *better* your photos will be.

Keep Your Distance

Kittiwake, USFWS Photo

Too close to birds!

* Repeated flushing, skittishness.

* Raised head, looking at observers.

* Excessive preening or pecking at dirt or foot, bill wiping.

* Alarm calls, repeated chirping and chipping.

* Pretending to have a broken wing.

Stellar Sea Lions, USFWS Photos

Too close to marine mammals!

* A rapid change in direction or speed.

* Escaping such as long dives or fleeing into the water from shore.

* Swimming in all directions.

* Interruptions of feeding or migratory activities.

* Looks aggressive or charges intruders.

* Attempts to shield a calf or pup from a human observer or a vessel.

* Vocalizations, finning, tail lobbing, tail raking, or breaching.

Tips for Wildlife Photographers

* **Observe** animals from the distance they (and you!) consider safe. **NEVER CHASE WILDLIFE FOR PHOTOS.** Professional pictures are usually taken with zoom lenses.

* **Approach wild animals slowly** and quietly, or find out ahead of time when they will be in an area and patiently wait.

* **Avoid sudden movements**.

* **Do not ever feed** the animals.

* **Avoid chasing** or harassing animals under any circumstances. Be especially careful around females with young.

* **Research.** Learn wild animal signals that tell you that you are too close. This is your signal to sit or stand quietly or move slowly away. You may lose the chance for a prize winning picture, but you wil be safe and so will the animal.

Fox kit, USFWS photo

Too close to mammals!

* Head raised high, ears pointed in the direction of the observer.

* Skittishness, the animal jumps at sounds or movements.

* Animal moves away or lowers head with ears back ready to charge, erect hairs on neck and shoulders.

* Displays of aggression or nervous behavior.

Birds

One of the easiest places to start wildlife photography is with birds eating at a bird feeder. Set up your tripod and try to capture the birds perched, hovering, grooming, or eating.

Research to know when and where the birds will be migrating. There are many, many types of shorebirds.

Wear boots and use care around mud flats and sand beaches. Know the tide schedule. Check the weather and know what to expect for light. Wear old clothes as you may get sandy, muddy, or dirty.

Prepare your equipment in advance. Use bird identification books and read about what you see. Know what you are taking pictures of.

Bartailed godwit, USFWS Photo

Use a tripod, as many shorebirds are in flocks and constantly on the move. With the tripod, you can capture the action fast without making the picture blurry.

Shorebirds

Attend a Shorebird Festival.
Held every Spring in Homer and Cordova.
http://www.homeralaska.org/shorebird.htm
http://www.ptialaska.net/~midtown/

In early May, coastal Alaska has as many as 5 millions shorebirds resting and feeding here during spring migration.

Rock Sandpipers-Shorebirds USFWS Photo

Birds at the Nest

Never approach too close to a nest, handle eggs, or baby birds!

Discover when and where your bird nests. Great horned owls nest when it is still winter. They don't make their own nests, but use hawk nests.

Glaucous-winged gull in nest. USFWS Photo

Use bird identification books, such as *The Peterson Field Guides* or *National Geographic Field Guide to the Birds of North America*. Check your library or internet. **Use binoculars and observe.**

Find nest building. Hawks or eagles often collect twigs, branches, and greens just before laying eggs. Hummingbirds collect spider webs by wrapping them around their bill. Watch for nest-building activity.

Prepare your camera and equipment away from the nest, so you'll arrive ready to take pictures. Attach camera to tripod, carry a chair or stool.

Be prepared to wait at the nest to get your picture. Move as little as possible. You may want to wait for the parents to leave. Take it slow. When the flash goes off, the birds will flutter, but

Alaska Mammals

Moose

Moose are unpredictable. With all wild animals, give them space. Do not feed them. Even a calf can injure you if it charges. When a moose charges, it kicks forward with its front hoofs. Keep your distance! Back off!

Take pictures from behind a solid barrier where you don't get the moose's attention. If possible, avoid using a flash. The flash may catch the moose's attention.

Look at your picture. Frame the moose and be aware of your light. Be patient and wait for your picture. Running and moving moose are very difficult to photograph.

Danger signs. To know if a moose may attack, look for:

- Long hairs raised on back hump
- Ears laid back
- Licking lips
- Walks right at you or appears to charge

Brown Bear with Salmon, USFWS photo

Moose calf, USFWS photo

Bears

ALWAYS use caution when around bears. Taking pictures of bears at a zoo or Big Game Alaska is the SAFEST way. KNOW your bears, read all you can about them.

Bears are often moving. They are difficult to capture on film. Their little beady eyes can get lost without some sort of light striking them. Work on getting their eyes in your picture.

Many photographers visit McNeil River or Brooks Camp and take pictures of brown bears standing in a waterfall, catching leaping salmon. This is not the way most bears catch fish.

Photographing a fishing or moving bear takes more skill than that of a grazing or resting bear. This is because of the action and having to deal with water.

Overcast days seem to be the best light for bears.

A cool thing about bears is being able to photograph their sides or with light coming behind them. Their hairs just naturally glow.

Marine Mammals

Taking pictures of marine mammals is different because of the ocean. You need to practice. Often you will be in a moving boat. The light and motion is constantly changing. It is one of the most difficult types of wildlife photography.

Try going on a nature cruise from Seward, Whittier, Homer, or anywhere they are offered. Practice taking pictures of marine mammals using a tripod.

Water reflects light and is constantly moving. Water is part of the picture and the landscape. Ice and snow also reflect light.

You need to learn how to take pictures from a distance. As with all wildlife, unless you are in a zoo or animal park, you need to be careful. Some marine mammals are endangered. You can help save these mammals by keeping your distance.

Research – The more you learn about marine mammals, the better you will be able to take pictures of them.

To get a good marine mammal photo, you must be patient. Allow the animal to approach you or your boat. Never chase a sea lion, sea otter, or any other subject. The trick is to change your own behavior to make the subject curious.

It's amazing how creatively marine mammals can avoid having their picture taken. Many seem to take great pleasure in approaching a photographer's boat up close, only to dart out of range before you can click the picture.

One way is to ignore the animal completely. Focus your attention on the bottom or some other creature, and the animal may come close to investigate. Another trick I use is to pick up a rock, and repeatedly toss it up and catch it. Frequently a nearby sea mammal will come in and investigate.

Sea Otter
USFWS Photo

Fish

Where to get good fish pictures:
If you visit the Seward Sealife Center or aquariums, you can get good pictures of fish in water. Salmon spawning areas, clear creeks and streams, and clear ponds or lakes are good places to take pictures of fish.

Underwater photography. Some digital cameras have special "underwater housing" to take the camera underwater. There are also waterproof cameras and disposable waterproof cameras, so you can use them in the water. Most professional pictures are taken by scuba diving photographers with special equipment. For underwater digital photo tips or equipment, check http://www.wetpixel.com.

Live fish photos are tough to get! Most people know how to take pictures of their fishing catch, but it's harder to get live fish. Have you tried to capture live fish in the water?

Fill the frame. You see it larger than it is and often have too much in the picture.

When taking pictures through an aquarium, remember light reflects off the glass! Angle your camera to reduce the reflection or put it right up against the glass.

Salmon swimming in creek, USFWS Photo

Grayling, USFWS Photo

Too close to fish!

- Fish see you and skitters away or hides.
- Fish abandon spawning places (holes in the creek or river bed dug by the fish) and move to deeper water or under cutbanks.
- Fish don't move back onto spawning places.
- Spawning behavior stops.

More Tips

Look for what makes pictures work --or not work.

Basic Photography Words			
angle	●up ●down ●straight	**framing**	●subject ●shapes ●composition
distance	●close ●medium ●far	**level**	●eye level ●high ●low
focus	●soft ●sharp	**pan**	●forward ●left ●right
zoom	●telephoto ●wide-angle	**composition**	●portrait ●landscape

RED Eyes

The cause of red-eye is biology—the pupils expand and contract when exposed to light. In bright light, the pupils are small; in low light they can get really big. Your flash travels through the dilated pupil and reflects light off of the blood vessels behind the retina inside the eye. This reflects light back at the camera in the form of a distracting red spot. LOONS HAVE RED EYES!!!

You can usually fix red eyes using your photo software.

Turn the lights on. Red-eye is worst in dark rooms, so turn on a light or move the subject to a brighter area. The pupils become smaller and reduces the red-eye reaction.

Look away from the lens. Some cameras have more red-eye effect than others. A flash located close to the lens, instead of one that pops up or is away from the camera, produces more red eye because the light hits the pupil directly. Have the subject look away, above the camera, or to the side opposite the flash.

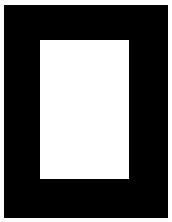
Get a removable flash. The best solution for red-eye is to move the flash away from the lens altogether. This is possible on cameras with a hot shoe or tripod connection for an external flash.

Practice at Home.

Use your pets or stuffed animals to practice! Try taking pictures in different light and capturing their eyes. You can try many poses in all kinds of light and learn what works.

Practice Framing.

Compose your pictures. Make a frame from cardstock, cardboard, construction paper, poster paper, etc.



- **Cut a rectangle** in the center. Look through the rectangle and pretend it is your view-fiender.
- **Zoom.** Move it forward and backward.
- **Landscape or Portrait.** Try turning it to see how the picture looks better.
- **Find the best picture** with the frame, before you use your actual camera. Now take the *real* picture.

Use the Experts.

Contact your local National Wildlife Refuge, Alaska Zoo, Big Game Alaska, reindeer and muskox farms.

Digital Image Library.

The U.S. Fish and Wildlife Service's Digital Image Library and Alaska Digital Image Library is on the web at http://images.fws.gov/

Rule of Thirds

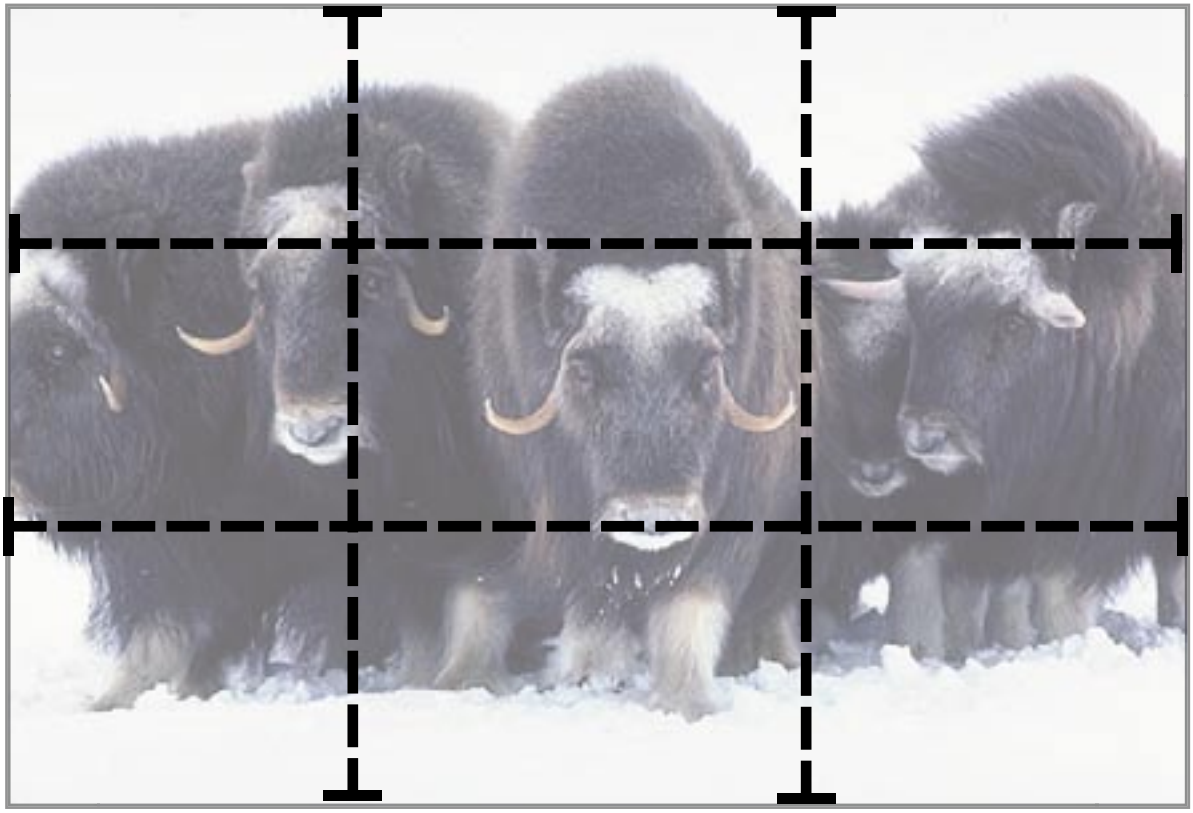
One of the most popular 'rules' in photography is the **Rule Of Thirds**.

It works like this:

When a picture is divided into thirds,focus your attention where two lines come together.

Look at the picture below. Draw imaginary lines and divide your image or picture into thirds. Imagine three boxes on each line and three columns. Put the subject of your picture where these lines come together. Good places to put things are at the first line from the bottom or edge of the picture, or a third of the way in from the left. Practice framing things in the middle, top, bottom, or away in the corner. See how it changes your picture..

Using the Rule of Thirds helps make your pictures nicely balanced and easy on the eye. It helps get rid of the 'tiny subject surrounded by vast empty space'.



Musk oxen, USFWS Photo

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Graphics can be found at the Alaska Image Library from http://images.fws.gov.

Ms. Laubenstein has worked as a USFWS photographer on special assignments, is a former photographer for the Health Resources and Services Administration/U.S.Public Health Service and other Federal agencies, and her photos are published in many newspapers and publications. She is a lifelong photographer and specialized in photography at Rochester Institute of Technology and at the University of Maine.